

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	2	"20050114094"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/14 14:31
S2	18	"lithography optimization"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/14 13:32
S4	8	S2 stack	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 14:45
S5	2	S4 reflectivity	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 13:55
S6	10	"optimal reflectivity value"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 14:48
S7	6	"reflectivity optimization"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:20
S11	0	"lithography optimiza\$8"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:13
S12	18	lithography adj optimiza\$8	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:13
S13	108	lithography adj5 optimiza\$8	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:14
S14	98	lithography adj4 optimiza\$8	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:14
S15	318	lithography with optimiza\$8	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:16
S17	1	S15 "R+S"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:17
S18	0	S15 "Reflectivity plus Sensitivity"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:17
S19	0	"Reflectivity plus Sensitivity"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:17

EAST Search History

S20	2	"Reflectivity" with "Sensitivity" with cost with function	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:18
S21	30	"Reflectivity" with "Sensitivity" with cost	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:18
S22	2	"Reflectivity" with "Sensitivity" with lithography	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:19
S23	5014	"R+S"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:19
S24	16	S23 reflectivity sensitivity	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:20
S26	55	S23 lithography	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:20
S27	13169	Reflect\$8 with optimiz\$8	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:21
S28	3644	(Reflect\$8 optimiz\$8).ab.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:21
S29	114	S28 lithography	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:22
S30	37	S29 refraction	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:23
S32	0	(reflectv\$6 optimiz&7).ti.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:23
S33	27	(reflectv\$6 optimiz\$7).ti.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:24
S34	477	reflectivity optimization multilayer stack	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:25
S35	145	reflectivity optimization multilayer stack lithography	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:34

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S36	2	S35 parameter extrema variable	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:26
S37	1	S35 "R+S"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:29
S38	21322	Lithography.ab.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:39
S40	0	S38 (optimiz\$7 reflectiv\$5).ab.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:35
S41	12	S38 (optimiz\$7 reflectiv\$5).ab.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:35
S42	0	S38 (optimal refraction stack).ab.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:40
S43	2	(optimal refraction stack).ab.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:40
S44	13	(optim\$8 refraction stack).ab.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:44
S45	2	extrema with cost with sensitiv\$6	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:45
S46	2	extrema with cost with reflectiv\$6	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:45
S47	2	extrema with reflectiv\$6 with input	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:47
S48	2	extrema same reflectiv\$6 same multilayer same stack	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:47
S49	54	sensitiv\$6 same reflectiv\$6 same multilayer same stack	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:49
S50	177134	Photolithography or lithography	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:49

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S51	4	(lithography same optimization) (multilayer with stack)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:52
S52	3	S51 reflectiv\$6	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/07 16:52
S53	2	"6471945".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/13 15:39
S54	41	("2197719" "3052552" "3664962" "3872021" "3912817" "4148872" "4150112" "4156715" "4156716" "4157385" "4159315" "4160054" "4160820" "4208431" "4217368" "4224345" "4271199" "4352825" "4585649" "4753790" "4828845" "4842762" "4952407" "5017385" "5073389" "5256402" "5380530" "5391315" "5629035" "5645821" "5698215" "5713738" "5736175" "5756074" "5824291" "5879728").PN. OR ("6471945").URPN.	US-PGPUB; USPAT; USOCR	AND	ON	2007/03/13 15:41
S56	0	(multilayer stack).ab. thickness "index of refraction" (optimiz\$5 optimum optimal).ab.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/14 13:33
S57	0	(multilayer stack).ab. thickness "index of refraction" (optimiz\$5 or optimum or optimal).ab.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/14 13:34
S58	0	(multilayer reflectivity).ab. thickness "index of refraction" (optimiz\$5 or optimum or optimal).ab.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/14 13:34
S59	0	(multilayer reflectivity (optimiz\$6 or optimum or optimal)).ab. thickness "index of refraction"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/14 13:35
S60	21	(multilayer reflectivity (optimiz\$6 or optimum or optimal)).ab. thickness	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/14 13:35
S61	10	(multilayer stack reflectivity (optimiz\$6 or optimum or optimal)).ab. thickness	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/14 13:36
S62	2	(multilayer stack reflectivity sensitivity (optimiz\$6 or optimum or optimal)).ab. thickness	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/14 13:37
S63	2	(multilayer stack (optimiz\$6 or optimum or optimal)).ab. thickness (reflectivity with sensitivity)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/14 13:37
S64	2	(multilayer stack (optimiz\$6 or optimum or optimal)).ab. (reflectivity with sensitivity)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/14 13:38
S65	13	(multilayer same stack same (optimiz\$6 or optimum or optimal)) (reflectivity with sensitivity)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/14 13:39
S67	9	S65 (simulat\$5 or model\$5)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/14 13:44

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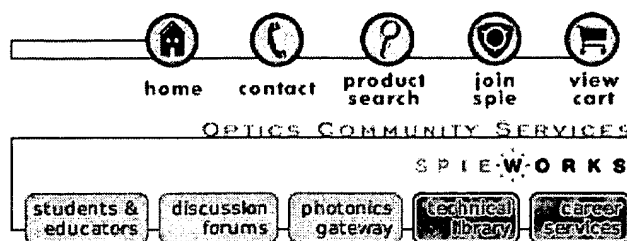
568	10	"optimal reflectivity value"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/14 13:53
569	0	"optimum reflectivity value"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/14 13:53
570	0	"optimiz\$5 reflectivity value"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/14 13:47
571	0	"optimiz\$5 adj3 reflectivity value"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/14 13:54
572	0	"optimiz\$5 with reflectivity with value"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/14 13:53
573	0	"optim5 with reflectivity with value"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/14 13:47
574	0	"optim\$5 with reflectivity with value"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/14 13:47
575	2	"optimal reflectance value"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/14 13:53
576	3	"optimum reflectance value"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/14 13:53
577	0	"optimiz\$5 with reflectance with value"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/14 13:53
578	0	"optimiz\$5 adj3 reflectance value"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/14 13:54
579	2149	703/2.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/14 14:31
580	2	579 (reflectivity or reflectance) with sensitivity	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/14 14:44
581	0	579 multilayer stack sensitivity extrema optimize	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/14 14:44

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S82	0	579 multilayer stack sensitivity extrema optimiz\$5	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2007/03/14 14:44
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Abstract

PUBLICATIONS

Optical lithography simulation and photoresist optimization for photomask fabrication

Rathsack, Benjamin M., Tabery, Cyrus E., Scheer, Steven A., Univ. of Texas at Austin; Pochkowski, Mike, Etec Systems, Inc.; Philbin, Cecilia E., Kalk, Franklin D., DuPont Photomasks, Inc.; Henderson, Clifford L., Georgia Institute of Technology; Buck, Peter D., DuPont Photomasks, Inc.; Willson, C. Grant, Univ. of Texas at Austin

Publication: [Proc. SPIE Vol. 3678, p. 1215-1226, Advances in Resist Technology and Processing XVI](#), Will E. Conley, Ed.

Publication Date: 5/1999

Abstract:

The demand for smaller and more uniform features on photomasks is rapidly increasing. The complexity of these patterns is also increasing with the need for optical proximity correction and phase shifting structures. These complex mask features demand unprecedented accuracy in pattern placement and dimensional control. We have conducted research designed to optimize the process for laser pattern generation by improving resolution and process latitude. Lithographic simulation was utilized for process optimization because of the very high cost of mask patterning and metrology experiments.

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